

Industrial Fiber Optic Cables, LSZH™ Tray-Rated, Corrugated Armored Cable, 12-288 Fibers



Features and Benefits

Corrugated armor
Mechanical protection

Low-smoke, zero-halogen sheath
Key life-safety benefit

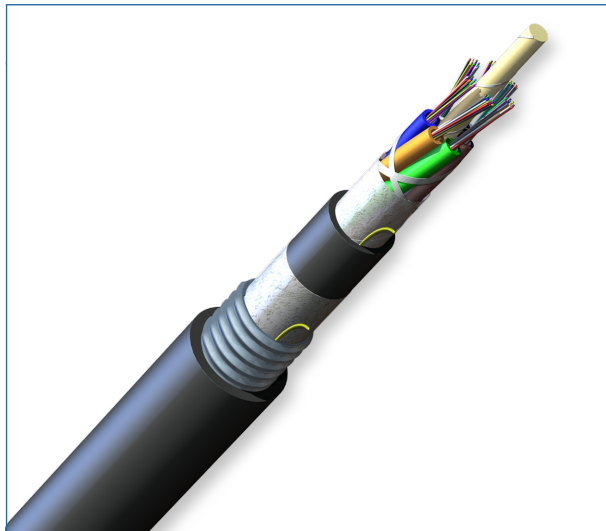
Meets cyclic impact and chemical resistance test
Superior performance

Tray-rated per UL 13; UL 444; UL 1277; UL 1685; CSA C22.2 No. 230 and No. 232
Tested to industrial ruggedness standards

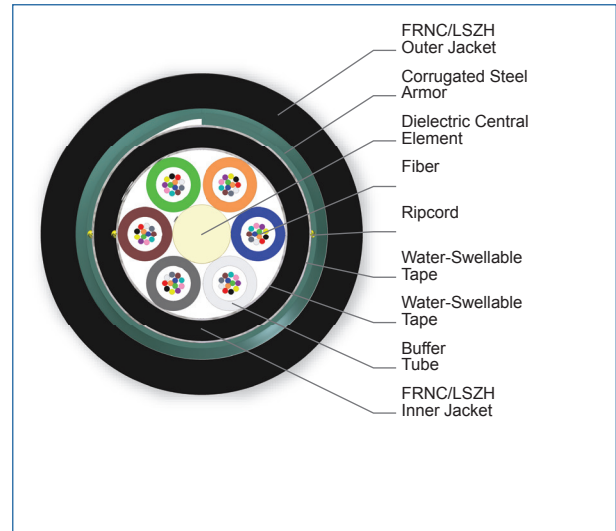
Listed OFCR-LS and CSA OFC FT4-ST1; IEC 60332-3, IEC 61034 and IEC 60754-2
Meets burn test criteria

Corning LSZH™ industrial fiber optic cables are designed for industrial building backbones and harsh environments atypical of traditional datacom systems. Based on proven stranded loose tube cable designs, these tray-rated industrial cables are flame-retardant and have been tested to meet mechanical/environmental conditions exceeding the requirements set for traditional datacom cables. When tested to specified “tray” application requirements, these cables have demonstrated superior performance levels for compressive loading, cyclic impact and chemical resistance. This ruggedized armored version offers additional mechanical protection and is also available in a gel-filled, cold temperature version. The 250 μm color-coded individual fibers offer quick and easy identification during installation, with 50 μm, 62.5 μm and single-mode versions available. A key benefit of Corning Industrial Cables is the low-smoke, zero-halogen (LSZH) sheath.

Corning LSZH industrial cables provide life-safety benefits for industrial applications through the cable’s construction. Many traditional data communication cables contain halogens in the jacket compound, which pose little risk in the controlled and protected environment of typical building air spaces, such as behind walls, under floors and in conduit. However, cables deployed in industrial applications, particularly on the plant floor, are typically at a greater risk of fire, extreme temperatures or chemical exposure. This often makes halogen cables inappropriate for industrial environments. When cables containing halogens ignite, they emit highly reactive gas-



Industrial LSZH Loose Tube, Gel-Free, Corrugated Armored Cables, 72 Fibers | Photo PIM0724



Industrial LSZH Loose Tube, Gel-Free, Corrugated Armored Cables, 72 Fibers | Photo PIM1623

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Standards

Approval and Listings National Electrical Code® (NEC®) OFCR-LS, CSA OFC FT4-ST1; Sunlight Resistant (SUN RES); IEEE-383/IEEE-1202 flame test; Suitable for Direct Burial (DIR BUR); IEC 60332-3, IEC 60754-2, IEC 61034

Common Installations Outdoor aerial and duct; indoor riser and general purpose horizontal according to NEC Article 770

Design and Test Criteria ANSI/ICEA S-104-696; UL 13; UL 444; UL 1277; UL 1666; CSA C22.2 No. 230 and No. 232

es that can be harmful if inhaled. When halogens combine with water, acids are formed. These acids damage both living tissue and inorganic materials, such as metal and electronic equipment. Corning LSZH industrial cables eliminate these risks in the event of a fire in the industrial environment. In addition, the LSZH compound does not drip when superheated; the material burns to ash, eliminating the onset of secondary fires.

Industrial LSZH cables are available in 12 different jacket colors, enabling easy visual identification and segregation of cables while still providing all the required environmental protection of an indoor/outdoor cable jacket.

Specifications

Temperature Range	
Storage	-50 °C to 75 °C (-58 °F to 167 °F)
Installation	-30 °C to 60 °C (-22 °F to 140 °F)
Operation	-50 °C to 75 °C (-58 °F to 167 °F)

* Note: Corning recommends storing indoor/outdoor cable in a proper temperature environment prior to installation to allow the cable temperature to meet installation temperature range specifications for best installation results.

Max. Tensile Strength, Short-Term	2700 N (600 lbf)
Max. Tensile Strength, Long-Term	810 N (180 lbf)

Mechanical Characteristics Cable						
Fiber Count	Buffer Tube Diameter	Nominal Outer Diameter	Min. Bend Radius Installation	Min. Bend Radius Operation	Weight	Product Type
12 - 72	2.5 mm (0.1 in)	14.8 mm (0.58 in)	222 mm (8.7 in)	148 mm (5.8 in)	238 kg/km (160 lb/1000 ft)	Corrugated steel armor
96	2.5 mm (0.1 in)	16.5 mm (0.65 in)	248 mm (9.7 in)	165 mm (6.5 in)	286 kg/km (192 lb/1000 ft)	Corrugated steel armor
144	2.5 mm (0.1 in)	20.1 mm (0.79 in)	302 mm (11.9 in)	201 mm (7.9 in)	395 kg/km (266 lb/1000 ft)	Corrugated steel armor

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Mechanical Characteristics Cable

Fiber Count	Buffer Tube Diameter	Nominal Outer Diameter	Min. Bend Radius Installation	Min. Bend Radius Operation	Weight	Product Type
192	2.5 mm (0.1 in)	20.3 mm (0.80 in)	305 mm (12.0 in)	203 mm (8.0 in)	381 kg/km (256 lb/1000 ft)	Corrugated steel armor
216	2.5 mm (0.1 in)				381 kg/km (256 lb/1000 ft)	Corrugated steel armor
288	2.5 mm (0.1 in)	22.5 mm (0.89 in)	338 mm (13.3 in)	225 mm (8.9 in)	465 kg/km (312 lb/1000 ft)	Corrugated steel armor

Chemical Characteristics

RoHS	Free of hazardous substances according to RoHS 2002/95/EG
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Transmission Performance

Multimode					
Fiber Core Diameter (µm)	62.5	50	50	50	50
Fiber Category	OM1	OM2	OM3	OM4	OM4 Extended Distance
Fiber Code	K	T	T	T	T
Performance Option Code	30	31	80	90	91
Wavelengths (nm)	850/1300	850/1300	850/1300	850/1300	850/1300
Maximum Attenuation (dB/km)	3.4/1.0	3.0/1.0	3.0/1.0	3.0/1.0	3.0/1.0
Serial 1 Gigabit Ethernet (m)	300/550	750/500	1000/600	1100/600	1100/600
Serial 10 Gigabit Ethernet (m)	33/-	150/-	300/-	550/-	600/-
Min. Overfilled Launch (OFL) Bandwidth (MHz*km)	200/500	700/500	1500/500	3500/500	3500/500
Minimum Effective Modal Bandwidth (EMB) (MHz*km)	220/-	950/-	2000/-	4700/-	5350/-

* Single-mode (OS2) fiber is ITU-T G.652.D compliant.

* 50 µm multimode fiber (OM3/OM4) meets 0.75 ns optical skew when used in all Corning Plug and Play™/Pretium EDGE® systems solutions.

* 50 µm multimode fiber (OM4) T90 10 Gigabit Ethernet distance assumes 1.0 dB maximum total connector/splice loss.

* 50 µm multimode fiber (OM4) T91 10 Gigabit Ethernet Distance assumes 0.7 dB maximum total connector/splice loss.

- Notes:
- 1) Improved attenuation and bandwidth options available.
 - 2) Bend-insensitive single-mode fibers available on request.
 - 3) 50 µm multimode fiber macrobend loss ≤ 0.2 dB at 850 nm for two turns around 7.5 mm radius mandrel.
 - 4) Contact a Corning Customer Care Representative for additional information.

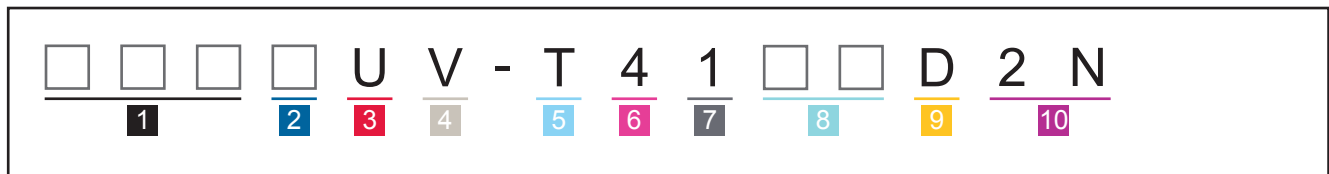
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Single-mode		
Fiber Name	ClearCurve® XB**	SMF-28e+® fiber
Fiber Category	G.652.D/G.657.A1	G.652.D
Fiber Code	H	E
Performance Option Code	01	01
Wavelengths (nm)	1310/1383/1550	1310/1383/1550
Maximum Attenuation (dB/km)	0.4/0.4/0.3	0.4/0.4/0.3
Typical Attenuation* (dB/km)	0.35/0.35/0.20	0.33/0.33/0.19

Ordering Information | *Note: Contact Customer Care at 1-800-743-2675 for other options.*



1 Select fiber count.

Standard offerings:
012 - 288
Increments of 12

2 Select fiber code.

K = 62.5 μm multimode (OM1)
T = 50 μm multimode (OM2)
E = Single-mode (OS2)
SMF-28e+®
H = ClearCurve® XB
Single-mode (OS2)

3 Defines cable type.

U = Loose tube, gel-free

4 Defines outer jacket.

V = LSZH™ Corrugated
Armored Cable

5 Defines fiber placement.

T = 12 fibers/buffer tube
(standard)

6 Defines length markings.

4 = Markings in ft (standard)

7 Defines tensile strength.

1 = 2700 N/600 lb (standard)

8 Select performance option code.

30 = 62.5 μm multimode (OM1)
31 = 50 μm multimode (OM2)
80 = 50 μm multimode (OM3)
01 = Single-mode (OS2)
(Max. attenuation 0.4/0.4/0.3 dB/km)

9 Defines cable type.

D = Loose tube, gel-free

10 Defines special manufacturing code.

2N = Standard

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Notes



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